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SOURCE Jen-min Hua-paoBALL BEARING MANUFACTURING IN CHINA

Chang Yu-shou
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The foundation of new China's ball bearing manufacturing industry consisted of some old and broken-down factories left by the old China. The Japanese imperialists had established a ball bearing manufacturing plant in the Northeast during 1938, because raw material and cheap labor were easily available there. However, the plant could process only the inner and outer rings and the fittings of axle bearings. The balls were imported. When the KMT controlled the Northeast, the ball bearing plant was seriously damaged and stopped producing.

Production in the ball bearing manufacturing plant was resumed later when the plant was in the hands of the Chinese people. In the spring of 1949, when the imported balls stored in the warehouse were practically used up, production was almost stopped. The leaders and the workers were very anxious. They knew that if no balls were imported there would be no production, and the operation of many plants and mines would be affected. This serious problem was presented to the Northeast Department of Industry. The Department of Industry asked the ball bearing manufacturing plants to experiment in the manufacturing of balls with some old grinding machines.

The important parts of the grinding machines were missing. The plant administrators gave the assignment of repairing the machines to Sung Shih-fa. Several old workers and ten or more apprentices were assigned to work with him. Chin Te-yuan, the shop leader, was supervisor. After two months, parts were added to the machines and they could be operated but the grinding wheels were not perfect. Sung Shih-fa read many reference books and asked questions of technicians, but he could not find the answer. But difficulty did not make Sung give up.

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According to the principle of children using their hands to mold clay balls, Sung Shih-fa made two steel plates for grinding. However, when the machine turned, the balls fell out. He then carved grooves on the steel plates. However, the plates were made of steel and did not grind well. He added rubber belts to the steel plates, but the belts were too elastic and soft and the balls manufactured were either too large or too small. Sung raised the question to Chin Te-yuan, who suggested cast iron plates for the grinding. After reading reference books and improving the machinery parts, the standard ball bearings were produced. The first perfect ball bearing was produced during the first half of 1949.

After the success of manufacturing ball bearings, the plant began mass production. Using 1949 as the base year, the production for 1950 was 300 percent, for 1952 was 560 percent, and for 1953 it was estimated at 1,250 percent. At present, over 1,000 types of bearing products are produced. The complete set of axle bearings from the inner diameter of 4 millimeters to the outer diameter of 500 or 600 millimeters were manufactured which attained international standards. For the next 5 years, with the aid of the Soviet Union, production of ball bearings in China will exceed the former production records and will be the best in quality and quantity.

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